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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,045	06/29/2006	Konrad Rocingh	HM-729PCT	2579
40570 7590 07/25/2011 LUCAS & MERCANTI, LLP 475 Park Avenue South, 15th Floor New York, NY 10016				
EXAMINER				
PATEL, VISHAL A				
ART UNIT		PAPER NUMBER		
3674				
NOTIFICATION DATE		DELIVERY MODE		
07/25/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INFO@LMIPLAW.COM

# Office Action Summary

**Application No.**

10/585,045

**Applicant(s)**

ROEINGH ET AL.

**Examiner**

VISHAL PATEL

**Art Unit**

3674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 July 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Unclear what applicant means by roller burnished, furthermore this limitation is considered to be a process limitation and given no patentable weight in an apparatus claim (e.g. [E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process).

For the purpose of examination the term rolled and/or roller-burnished is considered to be a process limitation, since after application of roller-burnished method the sealing surface is work hardened and its roughness is minimized (e.g. see application specification page 5, paragraph 2). The examiner agrees that roller-burnished creates a hard sealing surface but they are many known methods to form a hard sealing surface.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham (US. 6,375,195) in view of Keller (US. WO 02/074461).

Robotham clearly discloses all the limitations of claims 1 and 4-5. For example a device having a sealing ring (e.g. 6), roll neck or roll bush (e.g. 4), a holder (e.g. 14) having elastic sealing elements (e.g. 13a-13b), the sealing elements are supported by the body 13 or springs in the sealing elements and a chock (e.g. 9). The sealing ring (e.g. 6) having a sealing surface that is a coated with metal (e.g. column 2, lines 65-68) which is hard (e.g. chrome coating which provides a smooth hard surface). The sealing ring is fastened to the roll neck (e.g. column 2, lines 63-65, the sealing ring is fastened since it rotates on the roll neck after being mounted on the roll neck). Furthermore the member 5 prevents the sealing ring from moving axially. The sealing element having two arms that project in axial directions. The sealing surface having the hard coating.

Regarding the work hardened is considered to be a method limitation and given no patentable weight in an apparatus claim.

Robotham discloses the invention substantially as claimed above but fails to disclose that the two arms project in common axial direction. Keller discloses a device having an elastic sealing element having two arms (e.g. 23 and 24) that project in a common axial direction and

the elastic sealing element contacting a sealing ring (4). It would have been obvious to one having ordinary skill in the art at the time of the invention to have the sealing element of Robotham be replaced by the sealing element of Keller, to provide improved sealing between the sealing ring and the elastic sealing element (e.g. see abstract of WO 02/074461).

5. Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (WO 02/074461) in view of Robotham.

Keller clearly discloses a device having a sealing ring (e.g. 4), roll neck or roll bush (e.g. 1), a holder (e.g. 10) having elastic sealing elements (e.g. 23-24), the sealing elements are supported by the body or springs in the sealing elements and a chock (e.g. 5). The sealing ring (e.g. 4) having a sealing surface. The sealing ring is fastened to the roll neck (e.g. figures). Furthermore the member 22 prevents the sealing ring from moving axially. The sealing element having two arms that project in a common axial direction (e.g. 23 and 24 project in a common axial direction).

Keller discloses the invention substantially as claimed above but fails to disclose that the sealing surface having a smooth surface with a hard surface coating. Robotham discloses a seal ring (e.g. 6) having a sealing surface (e.g. surface of 6 that is coated) that has a smooth coated surface (e.g. column 2, lines 60-68) that is hard. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the sealing surface of Keller to have a coating as taught by Robotham to reduce heat that will provide longer lasting sealing (e.g. column 3, lines 1-5 of Robotham).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham and Keller and further in view of Draskovich et al (e.g. 5,544,897).

Robotham and Keller disclose the invention substantially as claimed above but fail to disclose that the sealing surface is nitrided (particular process of nitriding is considered to be method limitation and given little patentable weight in an apparatus claim particular a nitrided coating is taught). Draskovich discloses a device having a sealing element (e.g. 22) contacting a sealing ring (e.g. 32) that has a coating of nitrided (e.g. 42). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the metal coating (e.g. chrome coating) Robotham and Keller to be replaced by a nitrided coating as taught by Draskovich, since having one metal coating replaced by another is considered to be art equivalent (column 3, lines 4-5 of Draskovich).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham and Keller and further in view of Yoshida (US. 7,063,193).

Robotham and Keller discloses the invention substantially as claimed above but fails to disclose that the sealing surface is treated with hardening treatment and also a coating on the hardened sealing surface as argued by applicant (e.g. process that causes the sealing surface be hardened, which is claimed by applicant and argued). Yoshida discloses a sealing ring (e.g. sealing ring having a contact surface 200) with a cylindrical surface (e.g. surface 200 that is contacted by the lip seal 127e, figure 7), the cylindrical surface is a hardened surface (e.g. column 15, lines 29-30), the cylindrical surface has an oxidizing treatment (e.g. provides oxidized sealing surface, column 15, lines 42-47), the cylindrical surface also has a coating including one of PTFE, Nickel dispersion plating, Chrome plating and electroless Nickel plating. It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the sealing surface of Robotham and Keller to have a hardened surface which is oxidized

and have a coating as taught by Yoshida, to provide corrosion resistant, superior strength, heat resistant and anti wearing property (e.g. column 15, lines 38-42 of Yoshida).

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller and Robotham and further in view of Draskovich et al (e.g. 5,544,897).

Keller and Robotham disclose the invention substantially as claimed above but fail to disclose that the sealing surface is nitrided (particular process of nitriding is considered to be method limitation and given little patentable weight in an apparatus claim particular a nitrided coating is taught). Draskovich discloses a device having a sealing element (e.g. 22) contacting a sealing ring (e.g. 32) that has a coating of nitrided (e.g. 42). It would have been obvious to one having ordinary skilled in the art at the time of the invention to have the metal coating (e.g. chrome coating) Keller and Robotham to be replaced by a nitrided coating as taught by Draskovich, since having one metal coating replaced by another is considered to be art equivalent (column 3, lines 4-5 of Draskovich).

9. Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller and Robotham and further in view of Yoshida (US. 7,063,193).

Keller and Robotham discloses the invention substantially as claimed above but fails to disclose that the sealing surface is treated with hardening treatment and also a coating on the hardened sealing surface as argued by applicant (e.g. process that causes the sealing surface be hardened, which is claimed by applicant and argued). Yoshida discloses a sealing ring (e.g. sealing ring having a contact surface 200) with a cylindrical surface (e.g. surface 200 that is contacted by the lip seal 127e, figure 7), the cylindrical surface is a hardened surface (e.g. column 15, lines 29-30), the cylindrical surface has an oxidizing treatment (e.g. provides

oxidized sealing surface, column 15, lines 42-47), the cylindrical surface also has a coating including one of PTFE, Nickel dispersion plating, Chrome plating and electroless Nickel plating. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the sealing surface of Keller and Robotham to have a hardened surface which is oxidized and have a coating as taught by Yoshida, to provide corrosion resistant, superior strength, heat resistant and anti wearing property (e.g. column 15, lines 38-42 of Yoshida).

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robotham, Keller and Yoshida and further in view of Draskovich.

Robotham, Keller and Yoshida disclose the invention substantially as claimed above but fail to disclose that the sealing surface is nitrided (particular process of nitriding is considered to be method limitation and given little patentable weight in an apparatus claim particular a nitrided coating is taught). Draskovich discloses a device having a sealing element (e.g. 22) contacting a sealing ring (e.g. 32) that has a coating of nitrided (e.g. 42). It would have been obvious to one having ordinary skill in the art at the time of the invention to have the metal coating (e.g. chrome coating) Robotham, Keller and Yoshida\ to be replaced by a nitrided coating as taught by Draskovich, since having one metal coating replaced by another is considered to be art

#### ***Response to Arguments***

11. Applicant's arguments filed 7/5/2011 have been fully considered but they are not persuasive.

Applicants' argument with regard to roller-burnished is not persuasive since as stated in the rejection above this is not disclosed in the original specification. Furthermore the reference of Robotham teaches a coating that forms a hard surface on the sealing surface. As stated above



the limitations work hardened is considered to be method limitation and given no patentable weight in an apparatus claim.

Applicants' argument with regard to process limitations is not persuasive since the references teach a hard sealing surface.

Applicants' argument that neither Robothan nor Keller teach a roller burnished is not persuasive since as stated above in the rejection the surface of Robothan teach a sealing surface that has a hard coating, hence forming a hard sealing surface. It is also noted that applicant has not claimed a particular type of smoothness and a particular hardness.

Applicants' argument that Robothan does not teach a roller burnished sealing surface and the ring being fastened to the neck bush is not persuasive since Robothan teaches a sealing surface that is hard and the ring being fastened to the neck bush.

Applicants' argument that the reference of Yoshida add nothing to the teachings of Robothan and Keller is not persuasive because the reference of Yoshida teaches to treat a surface by hardening and then coating a surface.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Beach can be reached on 571-272-6988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. P./  
Primary Examiner, Art Unit 3676

/Vishal Patel/  
Primary Examiner, Art Unit 3674